

REMARKS

In response to the Office Action dated May 17, 2005, claims 7 and 11 have been canceled without prejudice (or disclaimer), claims 1, 6, and 8-10 have been amended, and no new claims have been added. No new matter has been added. Reexamination and reconsideration of the claims as requested is respectfully requested.

The Applicant thanks the Examiner for acknowledgement of the Information Disclosure Statement filed on November 27, 2003.

Claim 11 has been cancelled, and the rejections in the Office Action concerning claim 11 are now moot. In paragraph 4 on page 6 of the Office Action, claim 11 was rejected under 35 U.S.C. § 101 first paragraph. In paragraph 3 on page 5 of the Office Action, claim 11 was rejected under 35 U.S.C. § 112 second paragraph for being indefinite. Applicant's cancellation of claims 11 and 7 should not be construed as an acquisition to the arguments presented in the Office Action, and were made to expedite prosecution of this application.

In paragraph 1 on page 2 of the Office Action, claims 1-10 are rejected under 35 U.S.C. §102 (a) as being anticipated by Klose, et al. (WO 02/057194). The Office Action acknowledged that Applicant has a claim of foreign priority based on an application filed in Germany on March 26, 2001. However, the Office Action stated that the Applicant needed to submit a translation, verification, and certified copy to be accorded priority. Thus, the Applicant has submitted herewith an English translation of the German priority document DE 101 14 985.9, filed March 26, 2001, and a verification of the translation. An official copy of the certified copy of the priority document from the German Patent and Trademark Office has been ordered, and will be submitted upon receipt. The Applicant respectfully traverses this rejection based on its claim of foreign priority supported by the documents presented herewith, and that this rejection should now be withdrawn.

In paragraph 2 on page 3 of the Office Action, claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirayama (US 4,029,495) in view of Harter, et al. (US 2,467,889). The Applicant respectfully traverses this rejection, but has amended the application to overcome the objections.

To establish *prima facie* obviousness of a claimed invention, the Examiner has the burden of proving that three basic criteria are met. First, there must be some

suggestion or motivation to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. All three of these criteria must be met in order to support a finding of *prima facie* obviousness of a claimed invention (see, e.g., MPEP § 2142).

The Applicant has clarified independent claim one by claiming a spent aluminum silicate catalyst material having a content of at least 35 % by weight of aluminum oxide and "synthetic zeolite powder containing up to 5% by weight of rare earth oxides" added to the melt. The Applicant submits that neither Hirayama (US 4,029,495) nor any other reference of record teach or suggest all the claim limitations, and thus a *prima facie* obviousness has not been shown for currently amended independent claim 1.

Hirayama (US 4,029,495) relates to a process for recovering a catalytic component, namely heavy metals from a spent catalyst composed of the heavy metal and a non-combustible inorganic support. An object of the invention is to make the addition of natural materials like, in particular, bauxite, unnecessary. See e.g., translated specification, page 2, last paragraph; page 3, line 30 – page 4, line 2; and page 5, first paragraph. Hirayama teaches away from the benefits of the invention using synthetic zeolite, as described and claimed in amended independent claim 1, by using natural aluminum oxide as its solution.

Hirayama offers a different solution than the invention by using expensive natural sources; whereas the invention offers a less expensive and more beneficial solution to produce mineral wool. Synthetic zeolite cracking catalysts of the invention have several advantages for production of mineral wool. Synthetic zeolites comprise high amounts of Al_2O_3 fibers with favorable properties such as good durability and high resistance to moisture as well as alkalis and a good biodegradability are obtained. There is no teaching or suggestion in Hirayama (US 4,029,495) for using anything other than bauxite, and certainly not a synthetic zeolite powder. Hirayama does not suggest the use of spent cracking catalysts based on zeolite to obtain mineral wool with a high aluminum oxide content without adding aluminum oxide gained from natural sources, such as bauxite or corundum. Natural aluminum oxide sources are expensive, and

natural deposits already have been largely depleted. A benefit of the invention is that natural deposits are **not** necessary.

In stark contrast, as the Examiner noted in the Office Action the aluminum oxide used by Hirayama are too low. The Office Action, however, relies on example 4 that adds natural bauxite, which is not synthetic zeolite of the present invention, as currently claimed in amended claim 1. As discussed above, one aspect of the invention replaces the need for expensive natural sources of aluminum oxide with synthetic zeolite. The use of synthetic zeolite of the invention is not disclosed or suggested by Hirayama or Harter. This aspect in itself supports the invention as being a novel and non-obvious solution.

Moreover, the inclusion of the synthetic zeolite with “up to 5% by weight of rare earth oxides” introduces another novel, non-obvious, and beneficial feature of the invention in amended independent claim 1. The invention disclosed that a certain content of rare earth oxides has positive effects on both the melt properties and the fibers produced. Hirayama does not disclose, suggest, or teach the use of catalysts comprising rare earth oxides. Moreover, Hirayama does not disclose, suggest, or teach that a specified content range of rare earth oxides gives the fibers favorable properties. Based on Hirayama, one is **not** taught the use of synthetic zeolite powder **or** that synthetic zeolite powder containing up to 5% by weight of rare earth oxides imparts favorable properties.

The types of catalysts of Hirayama on the one hand and the invention on the other hand are totally different. The cracking catalysts as claimed in amended independent claim 1 use a synthetic zeolite material. The catalysts of the invention do not comprise noteworthy amounts of heavy metals that Hirayama is seeking for recovery. One would not expect Hirayama to provide a teaching or suggestion for the efficient production of mineral wool of the invention, and it clearly does not even suggest the synthetic zeolite material. The catalysts of Hirayama on the one hand and the invention on the other hand are also used for different purposes. According to the invention, cracking catalysts are used, whereas, the catalysts of Hirayama can be used for the production of synthetic polymers or desulfurization of petroleum, etc. (Col. 1, lines 7-16).

Thus, Hirayama by itself or with the combination of any reference of record does not support a *prima facie* case of obviousness for independent claim 1 or any of the pending dependent claims.

Harter, et al. (US 2,467,889), neither by itself nor in combination with Hirayama, renders independent claim 1 or any of the pending dependent claims as obvious. Harter, et al. generally describes the fabrication of mineral wool. Harter, et al. does not disclose, suggest, or teach making mineral wool using spent aluminum silicate cracking catalysts. In fact, Harter, et al. describes the addition of natural aluminum oxides, such as bauxite, is necessary. (Col. 2, line 49). Moreover, Harter, et al. makes no mention of rare earth oxides, or of the specific range of weights of beneficial rare earth oxides according to the invention.

The Applicant submits that amended independent claim 1 is in condition for allowance, and respectfully request withdrawal of the rejection of the pending claims under 35 U.S.C. § 103(a) as being unpatentable over Hirayama (US 4,029,495) in view of Harter, et al. (US 2,467,889).

All pending dependent claims depend from amended independent claim 1, were also rejected under 35 U.S.C. §103 (a) as being unpatentable over Hirayama (US 4,029,495) in view of Harter, et al. (US 2,467,889). While the Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the remarks made in connection with independent claim 1. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. "If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious." M.P.E.P. §2143.03; *citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, all pending dependent claims are also in condition for allowance, and the Applicant respectfully requests withdrawal of the rejection of the pending dependent claims under 35 U.S.C. § 103(a) as being unpatentable over Hirayama (US 4,029,495) in view of Harter, et al. (US 2,467,889).

Documents Cited but Not Relied Upon for this Office Action

Applicant does not need to respond to the assertion of pertinence stated for the references cited but not relied upon by the Office Action, since these references are not made part of the rejections in this Office Action. Applicant is expressly not admitting to this assertion, and reserve the right to address the assertion should it form part of future rejections.

CONCLUSION

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at (952) 253-4106.

Respectfully submitted,

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